

EUROPE REGIONAL MEDICAL COMMAND



The ERMCLRMC Telemedicine Program

Caring for Our Nation's Best

19 July 2002

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Telemedicine Definition

“The adaptation of information and communication technologies to the practice of medicine in order to diminish the barriers of time and distance”



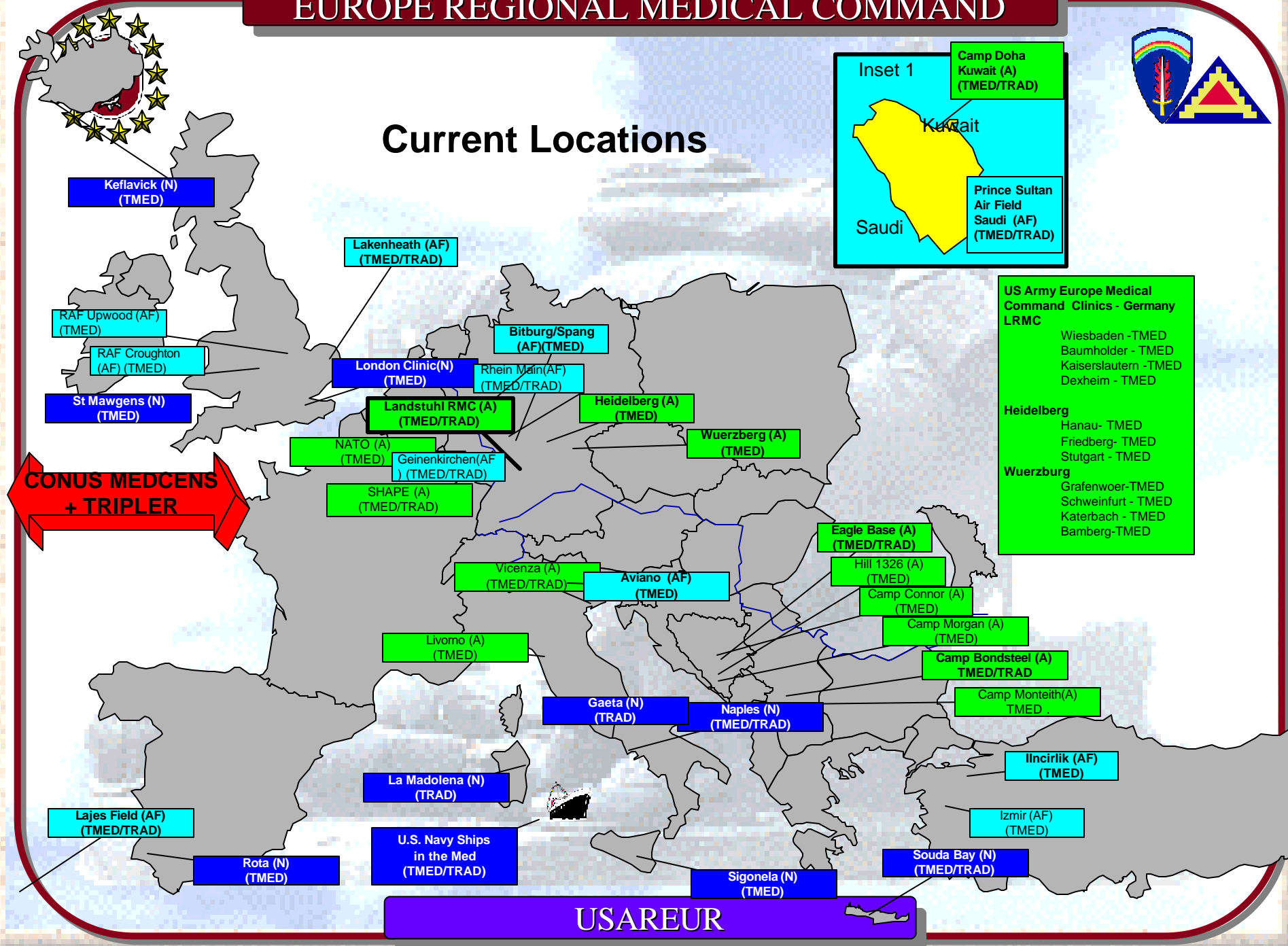
What it Does

Moves data -- Not people

- **Leverages specialty provider resources**
- **Reduces time and cost to achieve a primary diagnosis or obtain a second opinion**
- **Reduces Evacuations/Lost Workdays/Family Disruption**
- **Provides for a single standard of care regardless of location**

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Current Locations





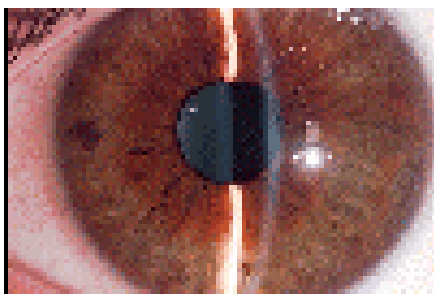
Types of Consults

We have worked

- Cardiology
- Dental
- Dermatology
- ENT
- General Surgery
- Neurology
- Nutritional Counseling
- OB/GYN
- Ocular Health
- Ophthalmology
- Orthopedics
- Pathology
- Physical Therapy
- Plastic Surgery
- Psychiatry/psychology
- Speech Therapy
- Veterinary medicine



Examples of consults we have received or requested



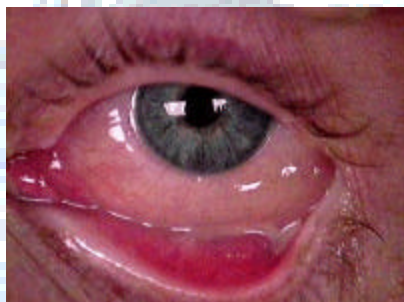
Ophthalmology



ENT



Plastic Surgery



Allergy

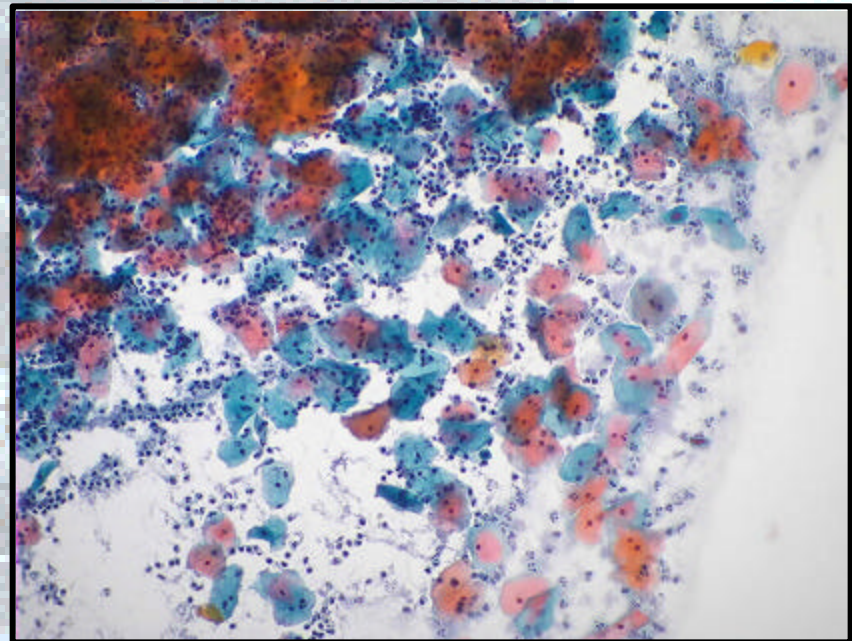


Orthopedics



Telepathology

- **Store and Forward technology utilizing digital camera attached to microscope, and web based consult forms.**
- **Images can be quickly and easily forwarded to anywhere world-wide**
- **Faster turnaround from Armed Forces Institute of Pathology (AFIP) results in earlier diagnosis and treatment**





Teleradiology

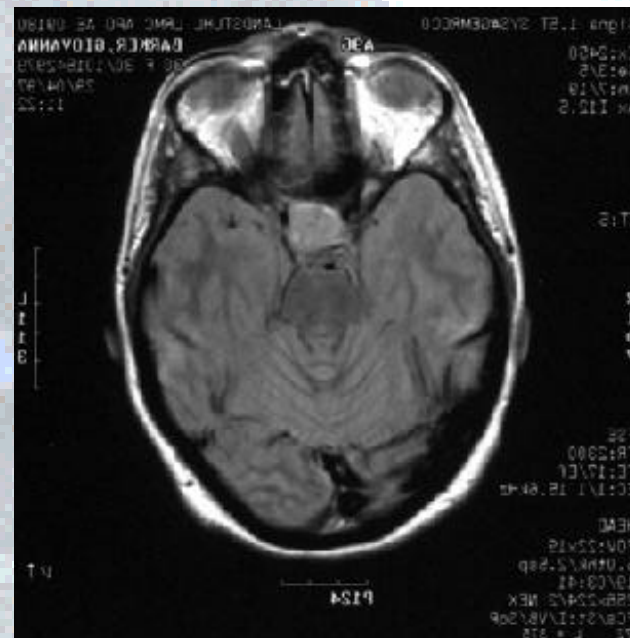
X-Ray

CRT

MRI

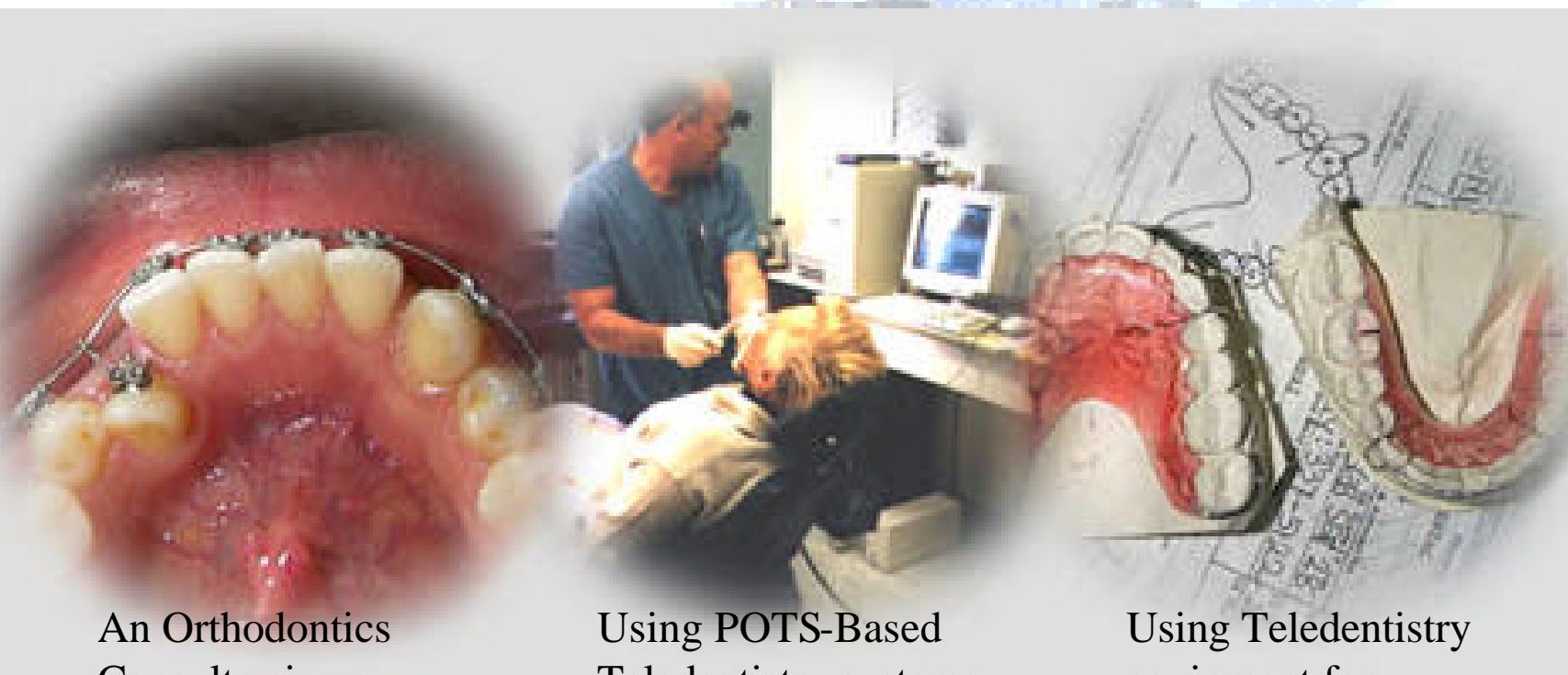
Ultrasound

- Currently providing primary support for 8 remote clinics, the deployed hospital in Bosnia and back-up support for the US Navy hospitals in Keflavick, Iceland; Rota, Spain; Naples and Sigonella, Italy.
- Daily routine radiology support throughout Europe.
- Sending and receiving digital images world wide.





Teledentistry



An Orthodontics Consult using a digital camera and Web-Based Consultation System

Using POTS-Based Teledentistry systems to send a consult to a specialist, Kleber Kaserne, Germany

Using Teledentistry equipment for communication between the dentists and the Area Dental Labs.



Teledermatology



- Secure store-and-forward technology utilizing digital camera photography, and a preformatted web- based consult form.
- Currently over 200 Referring Physicians from military medical facilities in Europe and Navy ships in the Atlantic and Mediterranean
- Three primary consult locations in Spain, Germany and England



Nikon 995 preferred digital camera



Tele Ocular Health



LRMC has received a Telemedicine Grant from the Medical Research and Materiel Command to conduct a study on utilizing telemedicine to triage patients with eye problems. Under this proposal

1. Peripheral teleoptometry devices (a Nidek non-mydiatric fundus camera and a Nikon Coolpix 950 digital camera which can be mounted on a slit lamp) will be installed at various Health Care Facilities (HCFs) throughout the TRICARE Europe region and in Bosnia and Kosovo.
2. The captured high resolution images will be sent via a secure web based interface to the server currently serving the teledermatology project and maintained at TRICARE Europe Office
3. It is believed this remote consult system will significantly reduce the number of patients being referred to European Ophthalmologists thereby saving TDY dollars, reducing disruption of the patient's family and optimizing the Ophthalmologist's time
4. The protocols are currently being staffed and when approved the equipment will be deployed.
5. For more information on this program contact CPT Haby Ramirez

(Haby.Ramirez@lnd.amedd.army.mil)



Other Projects

Distance Learning

- **Providing Continuing Medical Education (CME) and other required training to Medical Personnel at European and deployed or remote locations.**
- **Providing patient education opportunities to outlying clinics/remote locations.**
- **Weekly offerings (every Thursday) presented in “Lunch with a (specialist).” series and other regularly scheduled monthly education sessions.**
- **Provides European access to educational opportunities originating in the CONUS**
- **A full schedule of our offerings can be obtained by writing to LRMC-VTC@LND.AMEDD.ARMY.MIL and requesting the current distance learning offerings list be sent to you and to be included in the Distance Learning mail group.**



Other Projects

Ask-A-Doc

Low cost electronic email consultation system

- Available to all Health Care Providers throughout TRICARE Europe
- Provides clinical expertise, supported by the House Staff of Landstuhl Regional Medical center and some specialists at Walter Reed Army Medical Center
- Uses the Composite Health Care System (CHCS) as the electronic Intranet vehicle used to deliver this email system..
- Largely successful due to the efficient and rapid response time received on consults (within 24 hrs).
- Early experience has resulted in approximately 100 consults per month, primarily with Internal Medicine specialties.
- Seventy-one " Group Mailboxes " for each specialty at LRMC and backup to specialties not available in Europe but located at WRAMC
- Helps facilitate remote consults and eases the patient referral procedure
- Pre-assessment of a patient through Ask-A-Doc has helped in reduction of cost, in many occurrences, by negating patient referral altogether.



Other Projects

Tumor Board

- Meets monthly via VTC with Radiology Oncology specialist at Walter Reed Army Medical Center
- Reviews and evaluates all cases in which a diagnosis of malignant neoplasm is made
- Confirms diagnosis and recommends treatment and disposition of cases
- Other European MTFs are also currently being included
- These sessions not only provide confirmation and ratification of diagnosis and treatment but are also an excellent education tool for all involved.



Other Projects

Maternal Fetal Medicine

- This new program provides an avenue for European based OB/GYN practitioners to consult with specialists at Bethesda Naval Hospital to discuss problem pregnancies and other patient matters. The program currently involves the OB/GYN departments at Landstuhl RMC, Spangdahlem AFB, Germany hospital and the Navy hospital at Rota Spain. The program currently consists of:
 - Weekly video consult sessions with specialists at Bethesda Naval Hospital.
 - Secure Web based application for submitting patient data and digital images as well as for providing a forum for case discussions
 - Sharing of Ultrasound studies via secure web browser
 - Genetic counseling sessions are planned to be included in the near future.
- Other European medical facilities are invited to join. Please contact LTC (Dr. Ken Meade (ken.meade@lnd.amedd.army.mil)



Other Projects

Video Teleconferencing Services

Each of the Europe Regional Medical Command's Hospitals and the Command Headquarters are equipped with video teleconferencing equipment. Additionally most of the outlying clinics currently have video teleconferencing (VTC) equipment or will be receiving it soon.

These VTC units provide the venue for **medical awareness** programs, **telemedicine consultations** and **distance learning** programs for medical staff as well as **patient education** and group counseling opportunities.

Two video bridges are operated by the telemedicine office from the LRMC facility. These bridges can accommodate connections for up to 26 sites simultaneously and are used routinely for various training conferences and sessions throughout the TRICARE Europe medical community.

For more information on the video capabilities or services please contact LRMC-VTC@LND.AMEDD.ARMY.MIL



Other Projects

Balkans Satellite Support

- Ku band satellite service provided over commercial satellite to deployed locations
- Extends segment of the Landstuhl Local Area Network (LAN) via this satellite link to provide:
 - Ethernet link for email, web browsing, file transfer
 - H.323 based video conferencing
 - Sending/receiving Archiving of Teleradiology studies
 - Gateway to the Internet and numerous medical resources
 - Extended phone lines from the DSN military network

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Other Projects Balkans Satellite Support



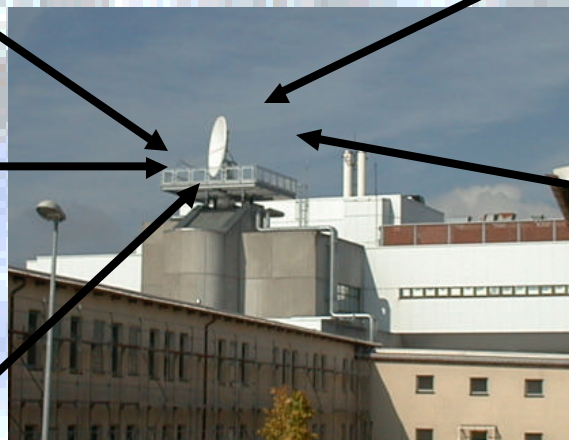
**Camp Morgan
Bosnia**



**Eagle Hospital
Bosnia**



Hill 1326 Bosnia



LRMC Hub



Camp Conner, Bosnia



**Bondsteel
Hospital Kosovo**

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Other Projects

Special Medical Augmentation Response Team (SMART)

•Purpose

Support legitimate emergency incidents at the request of proper civil or Federal authorities.

•Telemedicine SMART team capabilities

- Capable of deploying year-round, within 12-hours
- Initial on-scene incident assessment
- Ability to task organize and call forward additional tailored teams, supplies and equipment.
- Technical expertise and man portable telemedicine equipment sufficient to install, operate and maintain a rudimentary, emergency telemedicine capability
- Initial on-scene incident assessment
- Basic man portable communications equipment sufficient to communicate intra and inter-team and to home base.
- Assistance to civil authorities in communicating emergency patient and provider needs, providing local authorities with medical situational awareness from a remote field site.

•Team Composition

1 Chief Medical Officer (AOC 60-62)	1 Medical NCO (MOS 91B)	1 Visual Information Systems Operator (MOS 25R)
1 Operation Officer (AOC 70D/H)	1 Practical Nurse (MOS 91C)	1 Communications Specialist (MOS 31 S/U)

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Medical Awareness/Distance Learning



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The ERMC/LRMC Telemedicine Program

Thank You